Admiral's Corner

From Commander, Naval Safety Center

COs: You Can Prevent That "Knock on the Door"

After countless portrayals on TV and in the movies, the scene is too well-known: A military vehicle stops in front of a home. One or two uniformed officers get out, walk somberly to the door, then knock or ring the doorbell. A mother, father, husband, wife, or other family member is about to learn the tragic news they have lost their beloved service member. Any loss is devastating but especially so when it's from a preventable mishap.

Meanwhile, writing a letter to the family of that service member who died in a non-hostile mishap is one of the most difficult aspects of command. No commanding officer who has to write such a letter can avoid the silent frustration that comes with knowing, in most cases, the mishap could have and should have been prevented.

Today, commanding officers have access to many tools critical in greatly reducing, and one day eliminating, personnel losses from avoidable mishaps. Used with and incorporated into the routine operations of any afloat, aviation or ashore unit, actions like the following will help COs avoid having to write such letters and will spare families from that dreaded knock on the door.

1. Regularly visit the Naval Safety Center website and use the tools it offers at: www.safetycenter.navy.mil.

2. Schedule a baseline on-site safety survey, culture workshop, and/or online Command Safety Climate Assessment Survey (CSCAS). The CSCAS includes the Maintenance Climate Assessment Survey (MCAS) and the Command Safety Assessment (CSA), as appropriate for the command. A culture workshop helps unit COs better understand their command culture and provides outside risk-assessment data. The Command Safety Assessment survey looks at an organization's operational practices from a safety perspective. For afloat units, the Afloat Safety Climate Assessment Survey (ASCAS) is a new tool that helps assess the shipboard safety climate. Ashore commands can use the ESCS or Employee Safety Climate Survey to assess the command's overall safety climate and determine areas needing command attention.

3. Ensure the command has solid welcome-aboard, sponsorship, and mentorship programs, addressing both on- and off-duty safety issues. The programs must be updated regularly, and their successes must be measured by feedback from those members whom they are intended to serve. As you update your command mentorship program, ensure that embedded within the program are procedures to identify and track the command's potential and known high-risk personnel. Some members who might fall into this category include those who drive motorcycles, command members with a history of speeding tickets or other vehicular moving violations, known "thrill-seekers," and those with a disciplinary record. Train all hands about the cold, hard consequences of misbehavior, not following the rules, and not adhering to safety best practices. Make appropriate page 13 entries, documenting training.

4. Leadership must maintain high visibility within the command and regularly demonstrate the chain of command's commitment to safety. Take all mishaps seriously, and treat them the same.

5. Ensure all hands understand that each command member is held individually accountable for his or her actions and must follow regulations and established procedures.

6. Make operational risk management (ORM) work in the command; stress using it in all daily activities, both on and off the job. ORM is a proven decision-making tool and focuses on anticipating and identifying potential hazards and mitigating them. Doing so reduces potential injuries or equipment losses. ORM uses five steps for managing risk and is applied at one of three levels, depending on the situation. More ORM information is on the Naval Safety Center website at: www.safetycenter.navy.mil/orm/default.

7. In all communities, review how your team accomplishes crew resource management (CRM). With human error contributing to almost 90 percent of all mishaps, CRM focuses mishap-prevention efforts on people. Key CRM elements are situational awareness, assertiveness, decision-making, communication, leadership, adaptability and flexibility, and mission analysis.

All of these actions require proactive leadership and a safety cultural mindset that results in best practices 24/7. This safety mindset also must include family members. Safety education for dependents can be passed through familygrams, commanding officer "town hall" meetings, and command ombudsmen.

We can all take the steps necessary to prevent one of our families from having to face that dreaded "knock on the door." The tools and leadership already exist; we just have to put the two together.

RADM Dick Brooks

The NavAir HAZREC/MISREC Response Process

NavAir provides all the aircraft and weapon systems for the Navy and Marine Corps. Fleet-generated requirements are approved and funded by CNO (N78), and NavAir provides the research, development, and test and evaluation for the acquisition and support of those required systems. Specifically, NavAir provides naval aviation with aircraft, avionics, air-launched weapons, electronic-warfare systems, cruise missiles, unmanned aerial vehicles, launch and arresting gear, training equipment, and all support equipment related to naval air power throughout the life cycle of the programs. To provide these systems, NavAir also must research, design, develop, engineer, test and evaluate, repair, modify and provide direct in-service engineering and logistics support services to the fleet.

NavAir includes four program executive offices (PEOs), Naval Inventory Control Point (NavICP), Naval Aviation Depots (Cherry Point, Jacksonville and North Island), Naval Air Warfare Center Aircraft Division (NAWCAD), Naval Air Warfare Center Weapons Division (NAWCWD), and the Training Systems Division (TSD) in Orlando, Fla. NavAir also acts as the TyCom for squadrons supporting the developmental testing of aircraft and weapons systems for naval aviation.

By Cdr. Gregory Rucci and Mr. Thomas Clarke

How does a hazard or mishap recommendation (hazrec, misrec) work its way from the initial report, through the endorsing chain, to NavAir? The process begins with your identification of fleet hazards. The Naval Aviation Safety Program instruction (OpNavInst 3750.6R) defines the process the Navy and Marine Corps uses to investigate and report aircraft incidents and mishaps. Hazards are identified in both hazard reports and safety-investigation reports (SIR) as cause factors. The only difference between a hazard identified in a hazrep and one identified in a SIR is when the hazard is detected. If the hazard is detected and reported before it causes a reportable mishap (by far, the preferred method), then the command is required to issue a hazrep to notify system users of the risk identified and whether it concerns a mechanical, policy or human shortcoming.

As part of the analysis and conclusions contained in a report, the recommended actions are designed to eliminate or, at the very least, mitigate the identified hazard. At times, recommendations may be as simple as briefing the hazard for the sake of awareness and risk mitigation. Other times, the corrective action may be very complicated and costly, such as a redesign or modification of a system or subsystem to completely eliminate the hazard.

Hazards are defined as “routine” or “severe” as part of the risk-assessment process. This process is defined in Appendix B of OpNavInst 3750.6R. Assessing risk combines “hazard severity” and “mishap probability”

to get an overall "risk-assessment code" or RAC. RACs are identified on a numerical scale of 1 to 5, with 1 being the most critical risk and 5 being the least critical.

The endorsement process allows the chain of command in these units to weigh-in and make sure the causal factors and recommendations are defined and addressed accurately to the responsible activity. When the final TyCom in the endorsing chain sends NavAir a recommendation, NavAir accepts it for action. Severe hazards receive priority by NavAir and N78 when allocating resources for corrective actions. All severe hazards require a formal hazard answer from NavAir in the form of a hazrec or misrec response. In these responses, NavAir only addresses those recommendations specifically directed to NavAir, unless the submitting activity happens to fall under the controlling custody of ComNavAirSysCom, such as a test squadron or NADep.

Generally, NavAir provides three parts to each recommendation.

1. Does NavAir *concur* or *non-concur* with the recommendation(s)? For example, the program manager aircraft (PMA) concurs that the recommendation will solve the problem, or does not concur and why.

2. If the PMA concurs, the hazrec and misrec response also will specify corrective action.

3. The hazrec and misrec ends by telling the user the status of the action: Is the action "ongoing" or "completed"? (Generally, if action is "ongoing," NavAir tries to provide an estimated completion date to the fleet.)

The Naval Safety Center tracks all severe hazards until the corrective actions are completed. Any changes to corrective actions must include notification to the Safety Center. The NavAir aviation-safety office coordinates with the program office, fleet-support team and the NavAir vice commander to provide a formal NavAir response to all hazards identified as severe (RAC 1 and 2).

NavAir usually does not provide a formal hazrec or misrec response for routine hazreps or mishaps (RAC 3 to 5), but this standard does not mean that routine hazards are unimportant. The number of documented occurrences of a particular problem and the severity of the risk that hazard poses to the fleet are key in the PMAs determines appropriate NavAir response. The PMA continually monitors and evaluates hazards throughout the platform life cycle and takes action as necessary.

Although NavAir isn't part of the chain of command, they still have the requirement to accept, reject or change the corrective actions directed to NavAir. NavAir also is required to report all status changes on those actions until the action is complete. OpNav 3750R requires NavAir to respond with a hazrec or misrec within 30 days after release from the final endorser. In many cases, the engineering investigation and the engineering solution cannot be completed within 30 days, and that response is delayed. In those cases, NavAir provides a response as soon as possible.

A hazard report or mishap report may identify a particular risk that requires immediate action to prevent loss of life and/or aircraft. As part of the response, NavAir and N78 may redirect existing funds through a safety engineering-change proposal (ECP) from existing programs to mitigate the risk. Other hazards must be corrected through the normal budgeting and acquisition process, referred to as the planning, programming and budgeting system (PPBS).

Well-documented safety deficiencies with identified solutions don't guarantee correction. The modification of aircraft and/or systems can remain unfunded because of funding shortfalls, legacy systems, and other competing priorities. No special source of funding is available to address "safety" deficiencies. Safety improvements compete with operational improvements for available funding. Normally, the later a change is made in the life cycle of a platform, the greater the cost to effect that change. Improvements to existing or legacy systems compete with new programs for finite dollars.

Priorities for acquisition and the funding associated with them start with the operators. Several forums within the Navy, including the operational-advisory groups (OAGs) and the system-safety working groups (SSWGs) help set

community priorities. SSWGs work to identify material shortcomings, failures, or lack of installed systems that may affect safety of flight or a shortcoming that decreases mission performance. The priorities established in the SSWGs feed into the OAGs. The more the fleet identifies a specific problem, the greater the possibility that it will bring about change.

OAGs establish an overall prioritized system-requirement list for fleet-operator improvements that apply to each community. After the priorities are set, each program office prepares an input to the program-objectives memorandum (POM), based on the requirements of the individual programs. The services set their overall priorities and prepare a POM, documenting fiscal requirements based on input from the fleet and guidance from the defense-planning guide (DPG).

The DPG provides the strategic framework for the Office of the Secretary of Defense (OSD) to implement the national military strategy (NMS). The joint chiefs derive the NMS from the president's national security strategy (NSS). After the services and agencies submit their POMs, OSD examines and proposes alternatives to balance the limited funding across DoD to achieve the DPG goals. Programs are prioritized, and those programs that make it through the process receive funding.

This simplified review of the budgeting and acquisition process cannot be dismissed if one is understand how misrecs and hazrecs bring about change.

Each aviation community sets its priorities, and there is no special pot of money designated just for safety.

Improvements begin with the fleet and the identification of hazards. We cannot hope to eliminate mistakes, or ever assume to create the perfect fault-free platform or system, but our goal must be to intervene and identify those hazards before they turn into mishaps.

Your hazrep is necessary and essential for the system to work, and to help your community establish the correct priorities.

Contact the NavAir aviation safety department e-mail at:

M NAVAIR AviationSafety UD@navy.mil

Cdr. Rucci and Mr. Clarke are with Naval Air Systems Command.

Mishap-Free Milestones

VAQ-134	25 years	49,385 hours
VAW-121	38 years	74,065.9 hours
VP-4	33 years	213,500 hours
VS-30	25 years	88,000 hours
VFA-34	2 years	9,200 hours
VP-9	26 years	162,000 hours
HS-2	19 years	58,000 hours
HSL-43	2 years	10,000 hours
HS-4	9 years	20,000 hours
VAQ-140	19 years	29,480 hours
VAW-125	36 years	70,000 hours
VRC-40	21 years	95,517 hours
VP-46	41 years	285,000 hours

HOW ARE WE DOING?

Aviation (Rates = Mishaps Per 100,000 Flight Hours)

Class-A Flight Mishaps (FY05 thru 18 March)

Service	*Current Rate*	*FY04 thru 18 Mar 04*	*FY05 Goal**	*FY02-04 Avg*	*Fighter/Attack*	*Helo*
USN:	8/1.80	4/0.87	10/0.88	19.7/1.75	4/3.81	4/4.56
USMC:	3/1.96	7/4.91	7/1.94	14.7/3.97	2/3.28	1/1.38

** Goals based on FY02 baseline.* *rate above goal.* *rate below goal.*

Just Another Day at Work

By AW2 Patrick Neeley

It was just another hot and humid June day in the Arabian Gulf, and we were deployed on the new DDG Flight IIA with an East Coast HSL detachment. My crew and I came together at 1215 in the helo-control tower to brief. The flight was scheduled as a routine mission in which another AW and I would rebase our M-60 qualification. I clearly can remember thinking during the brief how this day likely would be just another "fun" day in the Gulf.

The NATOPS brief ended, and the crew scheduled before us went to preflight. Because we would not launch until after their flight, I returned to my duties. At 1530, my crew went to combat for our tactical brief. When I got there, however, I saw the ASTAC staring intently at his FLIR video screen. When I asked him what was going on, he said the previous aircrew had received a distress signal from an Iraqi dhow, and they were inbound to locate the distressed vessel. I stood next to the ASTAC and watched on the screen as a large cargo dhow came into view. I remember seeing the entire crew jumping up and down on the deck, waving crude flags, and smiling and yelling as the helicopter circled. The mood in combat intensified as talk spread of a possible terrorist strike against our helicopter.

As the on-scene crew reported that the vessel obviously was riding very low and taking waves over the deck, several courses of action were discussed. Soon the decision was made to keep the helicopter on-scene, while our ship turned and began the hour-and-a-half trek toward the distressed vessel. While I monitored the situation from combat, my OinC told me to dress out in SAR gear and be ready for a possible rescue. After

a quick check of my gear, I changed out and awaited the aircraft's return.

The ship arrived on-scene and recovered the aircraft for a quick hot-pump and crew swap. The previous crew's AW stayed in the helicopter as briefed, and we launched to support the ship's boarding team as they went to assess the problem. The ship's boarding team soon reported the vessel had been taking on water, and the engine compartment was flooded. The dhow's crew had been adrift with no food or water for two days. After bringing over food, water, and medical supplies, the dewatering process began. An Iranian tug soon showed up, and we were assured our help no longer was needed. My crew and I breathed a collective sigh of relief and headed outbound to continue with our M-60 shoot. Our shoot went off without a hitch as the sun went down. We started back to the ship, talking about how close things had come, and how much fun we'd just had.

As we were on final, the ASTAC came over HAWK link and told us to hold our position. We immediately asked what was happening, and then came the words that would steer the course of the next couple of days in a way that none of us could have guessed: "I think that dhow just sank."

chest and I took off my gunner's belt—I was going into the water.

I could see mother, nearly half a mile away, approach us. I sat dumbfounded in the door as we maintained our hover and did nothing. I later learned the decision had been made to let the ship's RHIBs, nearly a quarter-mile away, maneuver into position so we could continue the search for the other seven men in the water. We maintained our hover until the RHIB maneuvered into position to recover the three survivors, and then we continued our search.

As we searched, we received word one body had been recovered and one had sunk. That left another five men out there. We exhausted our fuel supply, refueled, and continued searching the area. By the end of the night, we had spent nearly seven hours airborne.

Exhausted and quiet, we landed and shut down. The adrenaline and sheer force of heart that had kept us going for so long began to fade. I could not help but feel sad for the seven men who had died that evening.

As a rescue swimmer, we're trained to handle the worst-case scenarios. I can remember all the crusty, old swimmers telling me if I ever did get a rescue, it wouldn't come when I expected. It wouldn't be at noon

Using FLIR, he had sighted three survivors clinging to a box amid the fuel and debris.

The mood immediately sobered as we broke off from our approach and bustered to the last known position of the dhow. We arrived to find the Iranian tug but no dhow. Simultaneously, the ship turned inbound to the site, and we began our search. The other crewman and I hurriedly began rigging the cabin for rescue. I sat in the door and did a last minute check of my gear.

I soon heard the ASTAC report the tug had picked up only one of 11 people from the water. After a few minutes of searching, my heart jumped as the HAC called out, "Come left!"

Using FLIR, he had sighted three survivors clinging to a box amid the fuel and debris. We passed over the survivors one time and then began our approach. The helo steadied out in a 40-foot hover just left and aft of the survivors, as I popped a chemlight and put my mask on my head. The crewman grabbed my harness and hooked me up to the rescue hoist. One smack on my

in a calm sea. Rather, it would come in the middle of the darkest night, in high seas, with fuel, debris and other hidden dangers spread everywhere. I always had laughed that idea off, but, considering that's exactly what happened, our rescue has become something much nearer and dearer to me.

I can't help but ask myself if we couldn't have done more to save those other men that night. I know there always will be a million "what ifs" and unanswered questions, and that is something everyone involved will have to deal with. With time, I have come to understand the truth, which is very simple: In the heat of the moment, when things seemed the worst, training took over, and we did exactly what all were trained to do. We saved three men. I'll never forget June 13, 2004—just another day at work.

AW2 Neeley is an aircrewman/rescue swimmer with HSL-44 Det 8 embarked on USS *Bulkeley* (DDG-84).

Spatial D Spinning

By Lt. Clay Shane

Finally, I was an SH-60B helicopter-aircraft commander-at-sea. After spending eight months at homeguard in various ground jobs, I had been given the opportunity to excel on the ship.

A light haze of snow was on the flight deck as we cruised in the Yellow Sea off the Korean coast. We were participating in yet another exercise.

The day's flight schedule had a few minor changes, and our flight was expected to be routine. The other HAC on the detachment had gone med-down for sinus problems, so I was double-bagging tonight.

"Sweet," I thought, "I can use all the nighttime flying at sea I can get."

I would be the HAC, and my OinC would get his NVG currency. Both of us had to requal on night dopplers, which we agreed would be easy. We had a thorough NATOPS brief and a good ORM discussion. We talked about how the zero illumination had caused problems the night before. I felt cocky and confident the inky blackness couldn't scare me. After the brief, I walked onto the flight deck and immediately started tumbling into the darkness of the black hole. It was an overcast night, and the only light was from a few lingering fishing boats. The conditions didn't matter, though, because we would be landing on the boat with NVGs. Vertigo, schmertigo!

As we threw on our dry suits, we discussed the gripes written in the book. One gripe was with the heading trim: "After 20 to 30 minutes, the heading gyro would precess about 30 degrees, knocking off the heading trim." This problem could seriously affect us at lower speeds—but only if it resurfaced. We needed to check the gyros every 10 minutes or so to make sure the system worked. I felt comfortable with the whole scenario. We were talking, briefing our concerns—we were ORM gods.

We found nothing wrong on the preflight, so we were ready to go flying. We hopped in for flight quarters and started the checklists. I found it odd, at the time, that the OinC kept asking me if I had tried the soup at dinner. I assured him that I had, but we should worry about that a little later.

We were airborne on time and without a hitch. I couldn't help but continue to pat myself on the back. We made a few sweeps around the area to make sure when we dropped the smoke, no South Korean fishing vessel would see our action as a sign of aggression. The area relatively was clear, and I remembered to periodically check the gyro—I was on top of things. We rolled through our automatic-approach checklist and threw out the smoke. The scenario was going according to plan.

I shot the first approach to the smoke with no problems. The aircraft did a great job, while I just hung on for the ride. I relinquished the controls to the OinC who did an approach short of the smoke so he could leapfrog closer the second time. We came up well short of the smoke and departed. As the helicopter gained altitude and airspeed, it was apparent we would overshoot the smoke on the second approach. We talked about our situation, and we were fine with shooting the approach into the inky nothingness. We continued to back up each other on the gauges during the second approach. The only mistake I made was to look up to see how dark it was outside. If I had just put my hands over my eyes, there would have been more light, and I would have been more comfortable. We departed without any problems. I finished my last two approaches and felt reassured I was the current guy in the aircraft.

The OinC had one more approach to do, and, again, we agreed to continue leapfrogging. The smoke would be dead soon, anyway. We began the approach, intently watching airspeed, altitude, and all the other instruments. When we were just about to be established in a steady hover, the master-caution light blinded us. We immediately sensed the problem most likely was with the heading trim, which we verified with the AFCS degraded light on the caution panel and by the heading cube on the control panel.

With the light stunning us for a split second, then throwing my head down to fix the computer, I was amazed to find the Seahawk could fly in an inverted hover. Wait, it just felt like we were upside down—I'm glad I wasn't at the controls. I quickly scanned my instruments and mumbled something over the ICS about my head, jello, and an industrial-sized blender.

When I could focus on the attitude gyro, I saw a lot of white. We were at zero knots and looking up 20 to 25 degrees, with a little left wing down. Remembering to always believe the instruments, I still had to question what I saw. With a glance outside, I saw those few fishing boats we had seen earlier now were crossing the windshield from right to left.

I finally stumbled across coherency and was able to say, "Nose high. Spinning. Spinning."

The OinC quickly said he also was experiencing a bit of spatial disorientation and was pulling power. I agreed, saying, "Good idea."

We increased our separation from the water and flew out of the hover.

The crewman in the back, who also enjoyed the weird sensations of spatial disorientation, said we never had gotten below the 80 feet we had dialed in for the approach. While that information was comforting, it still left a lasting impression that we had lost the bubble for a split second.

In our NATOPS briefs, we routinely hear, "If you are experiencing vertigo or spatial disorientation, 'fess up." It is apparent after this incident, you have to confess to yourself before you can confess it to anyone else. We had covered everything out of the ordinary that had happened while hovering in our NATOPS and ORM brief, so, even if we weren't expecting our whole world to begin spinning, we mentally were prepared once the world started tumbling.

We returned with a good idea of what will happen when you have vertigo or spatial disorientation in a hover, and we'll be prepared if it happens again. Both pilots experienced spatial disorientation heading toward the realm of vertigo, and both pilots went to the instruments. Once we had all the facts, we made decisions that kept us alive, warm and dry. Spatial disorientation is not something to be taken lightly, and crews can do a lot to prepare for it with a good brief.

Lt. Shane flies with HSL-51.

A Nearly Horrible Disaster

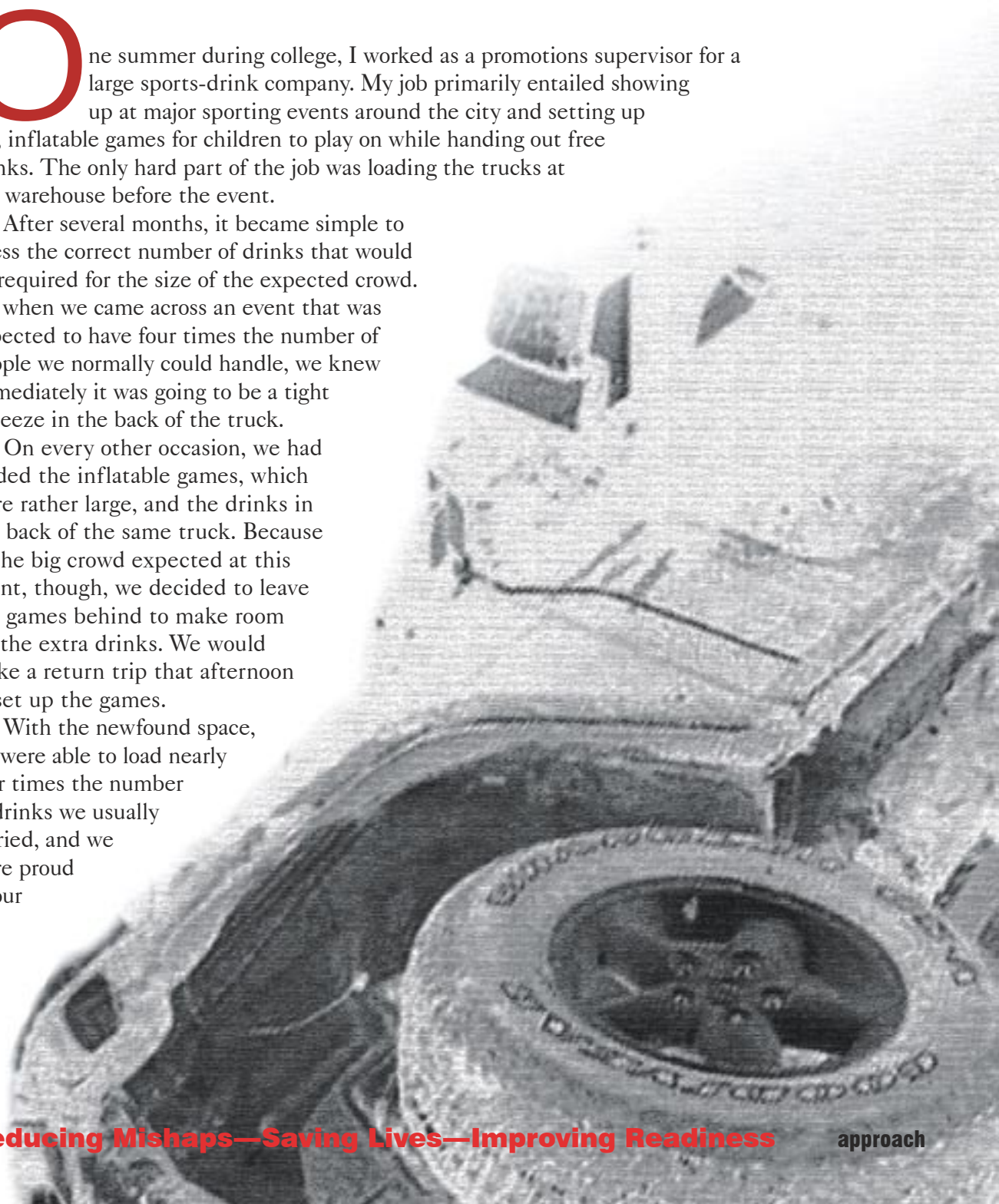
By Lt. Brian Taylor

One summer during college, I worked as a promotions supervisor for a large sports-drink company. My job primarily entailed showing up at major sporting events around the city and setting up big, inflatable games for children to play on while handing out free drinks. The only hard part of the job was loading the trucks at the warehouse before the event.

After several months, it became simple to guess the correct number of drinks that would be required for the size of the expected crowd. So, when we came across an event that was expected to have four times the number of people we normally could handle, we knew immediately it was going to be a tight squeeze in the back of the truck.

On every other occasion, we had loaded the inflatable games, which were rather large, and the drinks in the back of the same truck. Because of the big crowd expected at this event, though, we decided to leave the games behind to make room for the extra drinks. We would make a return trip that afternoon to set up the games.

With the newfound space, we were able to load nearly four times the number of drinks we usually carried, and we were proud of our



accomplishment. One thing we failed to comprehend, however, was the extra drinks weighed six times what the games did—something that would come into play later on.

After we had locked up the truck, my friend and I slapped each other on the back for what we thought was an impressive loading job and jumped in the cab. As we began to drive away, we heard a constant grinding sound from the rear of the truck. I pulled over, and, when we walked around the vehicle, we noticed the rear mud flaps were dragging the ground. We knew the truck was a little overloaded, but this event was very important, and it was only 6 miles away.

As we turned onto the ramp, I gave the truck a little extra gas to get up some speed, and we heard a loud crash from the back, as some of the drinks shifted aft.

We were getting short on time, and, knowing we couldn't let the flaps drag the entire way, we opted for the fastest solution: remove the mud flaps. Within two minutes, the flaps were in the cab, and we were on our way. It soon became clear we would be late if we stayed on the back roads, so we headed to the freeway.

While slowing at the stoplight that would lead us onto the freeway, I noticed the truck took much longer than usual to slow down. I laughingly remarked we'd better make sure our seat belts were on tight. As we turned onto the ramp, I gave the truck a little extra gas to get up some speed, and we heard a loud crash from the back, as some of the drinks shifted aft. Neither of us was as concerned about the weight shift as much as we were happy the bottles were made of plastic and probably hadn't broken.

We weren't on the freeway for more than a minute when I tried to accelerate and switch lanes to get to our exit ramp, causing more bottles to slide back. Witnesses later stated they saw our back end grinding on the tires, causing them to smoke the entire time we were on the freeway. Unfortunately for us, the back tires became so overstressed they blew out, and I lost control of the truck. Now, bottles shifted everywhere, causing the back end of the truck to swerve all over the road; it was a miracle I avoided hitting any cars.

The truck veered to the left and slammed into a 4-foot-high median, causing the left side of the truck to fly into the air. It eventually landed on its right side, then skidded and spun down the road for 50 yards. When we finally came to a stop, we were facing traffic, and all I could see were cars swerving to avoid our truck, which now was blocking all three lanes of the freeway.

I looked down at my buddy, who was covered with all the gear we had stored in the cab, including the mud flaps. Thankfully, neither of us was injured, and, with the help of good Samaritans, we managed to climb out of the wreck. Needless to say, we didn't make it to the sporting event.

With hindsight being 20/20, I realize my mistakes. I ignored some definite warning signs en route to this accident: the added weight of the bottles, the mud flaps dragging, and the truck taking an exceptionally long time to slow down. If we had stopped and thought about the risks at any of these signs, the accident easily could have been avoided. Instead, we focused on getting to the event on time, despite all the telltale signs.

We not only risked our own lives, but the lives of everyone else on the road. Fortunately, no one was injured because of my poor judgment that day, and I learned a valuable lesson on applying ORM to everything you do.

Lt. Taylor flies with VAQ-139.

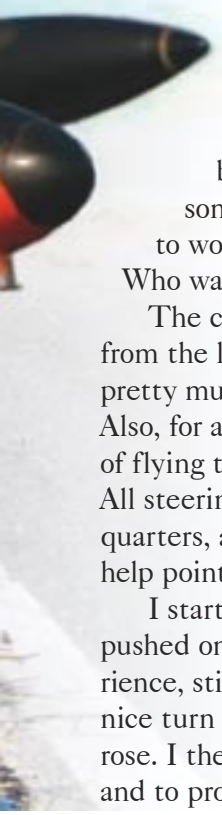
Offroad Incident

By LCdr. D. Allen Lamberson

There I stood, all proud of myself, having just completed my first solo in the mighty Buckeye. I was king of the world, or at least NAS Pensacola, where I was a student at VT-4. All of the instructor pilots were excited, as well, because students who had completed their solos now were "turn qualed." This term meant I could start and taxi the airplanes for the contract-maintenance personnel, who maintained our jets.

I soon was presented with my first opportunity to excel. The phone rang in the ready room; maintenance needed someone to taxi a jet to the compass rose for some required maintenance. Several instructors were hanging around and immediately began giving all kinds of excuses to get out of doing the taxi. One of the instructors spied me trying to hide in the "geedunk." I quickly was shooed out of the ready room and down to maintenance control.

I carefully looked over the book and met the maintainer who would ride in the back and talk me through the "compass swing." The task didn't sound too hard; since I wasn't taking the plane flying, I didn't have to sign anything. Off I went, secure in the knowledge that everything, including some recent brake work, had been done correctly, and I would be starting up a safe jet.



The checks, start-up and taxi out of the line were uneventful. The brakes felt a little different than what I was used to, but the mech checked them and reminded me some brake work just had been completed. "Not to worry," he said, "they just need to be broken in." Who was I to argue?

The compass rose at NAS Pensacola is a long taxi from the line, and everything that goes on over there is pretty much out of sight of VT-4 and the control tower. Also, for all of those who never have had the pleasure of flying the Buckeye, there is no nosewheel steering. All steering is done with brakes, or, sometimes in close quarters, a lineman will hookup a towbar to the nose to help point it in the right direction.

I started the right turn into the compass rose and pushed on the right brake, which, in my wealth of experience, still felt a little funny to me. The jet made a nice turn onto the short taxiway leading to the compass rose. I then pushed on the left brake to stop the turn and to proceed straight, but I was alarmed at a lack of response. Naturally, I pushed harder on the left brake until it "hit the floor," with no more travel to be had from the toe brakes.

The nose of my airplane continued through the centerline of the taxiway and now was pointing off the side and down a small slope. The mech in the back seat asked me what was going on. I honestly have no idea if I responded or not, but I clearly remember him calling, "Whoa! Whoa!" as we started through the grass.

I shut down both engines because we were departing a prepared surface and hung on for the ride. After what seemed like an eternity of bouncing and jostling about, I wound up on another taxiway. I again started pushing on the brakes, and the right brake seemed to catch; I stood on it with all my might. Although this effort made the jet spin around and around the right wheel, it thankfully kept us on the taxiway. Once everything came to a stop, the world went quiet.

I expected the fire trucks soon to show up. But, because I hadn't made any transmissions on the radio, and I couldn't see the control tower or the squadron from where I was, it seemed my bad situation was starting to get better. Nobody knew about my predicament.

The mech hopped out of the airplane and messed with the brakes. Whatever he did made both of the toe brakes feel much better. He suggested the brakes were "good enough" to get us back to the line. I started up the jet, uneventfully taxied back, shut down, and made some references to maintenance control that the brakes needed some more work. I then scurried off to find my buddies and to figure out what to do next.

They listened to my story with amazement. Because there was no damage to the jet, and nobody except me and the mech (and now a few of my fellow students) knew what had happened, they told me to keep my mouth shut (which I did).

All was well, and nobody said anything to me until my winging ceremony. The tradition at VT-4 is that all of your student buds write stories about you, which then are read by the CO while you are on stage getting your wings. When the skipper came to the part about my taking a T-2 offroad, he stopped reading, turned to me and asked what that was all about. I nervously mumbled something about him not really wanting to know, and that was the last mention ever of my offroad incident.

LCdr. Lamberson currently flies with VAW-77.

Photo by Matthew J. Thomas

An Eventful

By Lt. Brien Croteau

My most memorable car ride took place one Sunday afternoon on a lonely stretch of I-10. I was returning from my parents' house in Tallahassee, Fla., to Pensacola, where I was stationed at Sherman Field. I had been on the road about an hour when the rain began to come down in earnest.

I had seen many rainstorms before, but this one was heavy. Visibility was so bad I slowed down to 20 mph, hoping I would have time to stop if I saw brake lights ahead. The deluge lasted only a few minutes, and, while the skies still looked threatening, visibility was good, so I sped back up to highway speeds—about 60 mph.

I really liked my truck. A 4x4 crew-cab pickup, it was the first new vehicle I ever had bought. I had been looking forward to getting to take it off road, though I never thought that chance would come in the next few moments. I hadn't noticed the standing water in the ruts worn in the road.

My first sign of trouble came when the back end of my truck suddenly slid out from under me. My heart beat faster as I realized I had no control over the vehicle. The truck began to drift to the left; then, I saw a median looming ahead, and I panicked at the thought of flying into oncoming traffic. I turned the steering wheel to the right, but that move had no effect on where I was pointing.

I remember lightly tapping the brakes,

Trip Home

which started the truck spinning clockwise. I was relieved I was heading toward the right now. A witness said I spun five or six times before leaving the roadway, at which point my tires dug into the soft grass on the shoulder. The truck subsequently flipped two-and-a-half times before coming to rest on the roof of the cab, only 6 feet from a tree line.

While the truck had been spinning, it felt as if time was slowing down. I remember thinking, "This is it; this is how I'm going to die." The centrifugal motion had forced my body toward the center, and I later saw how the left portion of the roof had been crushed a foot inward on landing. I only can imagine how badly my head would have been crushed if I had remained in the driver area.

When all motion had stopped, I was amazed not to feel any pain. I had an adrenaline rush as I undid my safety belt and fell to the roof. I then climbed out of the shattered window and was relieved to see a good Samaritan running to help me. As I sat on the ground, my whole body shook. I looked back to the remains of my truck and noticed the tires still were spinning.

Within 15 minutes, a highway-patrol officer, fire truck, ambulance, and tow truck had arrived. I sat in the patrol car while he called my parents to let them know I was all right and needed a ride. I met them at a restaurant off the next exit ramp, and we drove to the auto-shop parking lot so I could grab the personal effects from my truck. It was strange seeing the twisted frame; I felt lucky to be alive.

I learned many lessons from this experience. First, I realized I was driving too fast for the conditions, even though I wasn't exceeding the speed limit. As the state trooper reminded me, the posted speed limit assumes the best weather and road conditions. I should have slowed to reflect the hazards.

Next, although my truck was a great vehicle around town, it handled quite differently on the highway at faster speeds. With nothing in its bed on the day of my accident, the pickup wasn't the best highway cruiser. That factor figured into the next vehicle I bought—one equipped with full-time all-wheel drive, a stability protection system, and six airbags.

Finally, I learned I could believe what I always had heard about how to drive over ice or when skidding. I knew you were supposed to keep the steering wheel straight or to steer slightly into the slide. I also had heard the brakes wouldn't be effective without traction. Knowing these things is what caused me to panic when I realized my truck was out of control.

In the past year, I have attended a safety driving school that gave me a new appreciation for my own driving skills. I also feel more comfortable if an unexpected situation develops while I'm at the wheel. I highly recommend a safety driving school to everyone; it's money well spent. Besides, most insurance companies will discount your premium if you have attended a certified school.

I was lucky; my accident only cost me my vehicle. I just hope my lessons learned can prevent someone else from having a similar misfortune.

Lt. Croteau flies with VAQ-139.

Operational Risk Management

Does your squadron try to minimize risk? Here's a worksheet VP-10 Sailors fill our before going on leave/liberty.

ORM point of contact:
Ted Wirginis, Code 11
Naval Safety Center
(757) 444-3520 ext. 7271 (DSN 564)
theodore.wirginis@navy.mil

VP-10 LEAVE/LIBERTY RISK ASSESSMENT WORKSHEET

NAME: _____WORKCENTER/DEPT: _____

Effective Risk Assessment requires the identification of risk-taking behaviors. This worksheet will give you a chance to think about your upcoming leave/liberty period and control the risks involved. Supervisors will discuss results for the purpose of the individual's welfare. Scores are used to counsel member in high-risk areas and not for approval/disapproval of leave/liberty. Return completed form to the Safety Dept. A copy should be maintained in his/her Divisional file.

	RISK FACTOR	POINTS
1. Age	25 Years or Younger = 1 Pt.	
2. Paygrade	E-5 and Below = 1 Pt.	
3. Gender	Male = 1 Pt.	
4. Marital Status	Single = 1 Pt.	
5. Driving Record	Moving Violations Last 12 Months = 2 Pts. each	
6. Time Since Last Deployment	Deployed Over 30 Days and Home Less Than 30 Days = 4 Pts.	
7. Distance to Travel	Less Than 150 Miles= 1 Pt. 150 To 250 Miles= 2 Pts. Over 250 Miles= 3 Pts.	
8. Incidents of Alcohol Abuse	8 Pts. Per Incident (OUI/DUI, Alcohol Related Incident, Under Age Drinking)	
9. Ratio of Travel Days to Leave	Less Than 1 to 5 = 0 Pts. 1 to 4 = 2 Pts. Greater Than 1 to 4 = 4 Pts.	
10. Rest Prior to Departure	Less Than 8 Hours = 4 Pts. Over 8 Hours= 0 Pts.	
11. Rest Prior to Returning to Work	More Than 12 Hours = 0 Pts. 11 to 8 Hours= 2 Pts. Less Than 8 Hours= 4 Pts.	
12. Driving Alone	Yes= 3 Pts.	

13. Driving at Night	Yes= 3 Pts.	
14. Motorcycle Travel	Yes = 5 Pts.	
15. Travel During Holiday Period	Yes = 2 Pts.	
16. Medications	Do Your Meds Cause Drowsiness? Yes = 5 Pts. Do They Restrict You From Operating Motor Vehicles?	
17. Seatbelts	Will You/Passenger Be Wearing Seat Belts? No = 10 Pts.	
18. Vehicle Type	SUV & Truck = 0 Pts. 4 Door =1 Pt. 2 Door = 2 Pts.	
19. Vehicle Inspection	Vehicle Inspection Is Over 3 Months Old= 1 Pt. Over 6 = 2 Pts. 12 or More = 4 Pts.	
20. Personal Stressors	Marital Trouble, Death In Family, Career Decision Looming = 2 Pts. Each	
	Total Points (Items 1-20)	
21. Activities	Intend to Participate in Recreational Activities? 2600 Navy Personnel Are Killed or Injured Each Year	
	Water Sports: Swim, Surf, Fishing = 1 Pt. Each	
	Water Rec: Boating, Sailing, Jet Ski, Wave Runner, Scuba Diving, Skiing = 4 Pts. Each	
	Hiking or Climbing = 2 Pts. Each	
	Snow/Skateboarding, Skiing, Inline/Ice Skating = 2 Pts. Each	
	Mountain Biking = 2 Pts. Each	
	Football, Basketball, Racquetball, Softball, Tennis, Volleyball, Soccer = 2 Pts. Each	
	Firearms (Hunting, Target Range, Archery) = 5 Pts. Each	
	Total Points (Item 21)	
	Total Assessment Points (Items 1-21)	

0-15 Points = Low Risk 16-31 Points = Moderate Risk 32 Points Or More = High Risk

Don't Drink and Drive!

For activities selected that are assessed 3 points or higher, explain what actions you can take to increase your awareness and/or minimize your risks below. SUPERVISORS, encourage personnel who are planning to drive long distances not to travel immediately after return from deployment, or immediately after a work shift. Urge proper rest before starting out. Has supervisor been provided with travel destination, mode of travel, travel distance, expected arrival time? On the return trip, day and time of return and emergency phone numbers? Encourage the use of motor vehicle and recreational checklists provided by the Naval Safety Center at *www.safetycenter.navy.mil*, under Shore Safety.

Individual's Signature _____ Date _____

Supervisor's Signature _____ Date _____

Worksheet submitted by AE1(AW/NAC) Ryan Boney, VP-10 CSPO.

Skid Row in Houston

By Lt. Robert Eilers

I've had several interesting and unforgettable experiences in the great, and somewhat "peculiar," state of Texas, while working my way through training en route to the fleet. But few experiences can rival the one that involved a beat-up TH-57 Jet Ranger with a pink door, the U.S. Army air cavalry,

"Ninety gallons? No problem..."

and an unassuming Indian fueling technician who only was trying to do exactly as he was told.

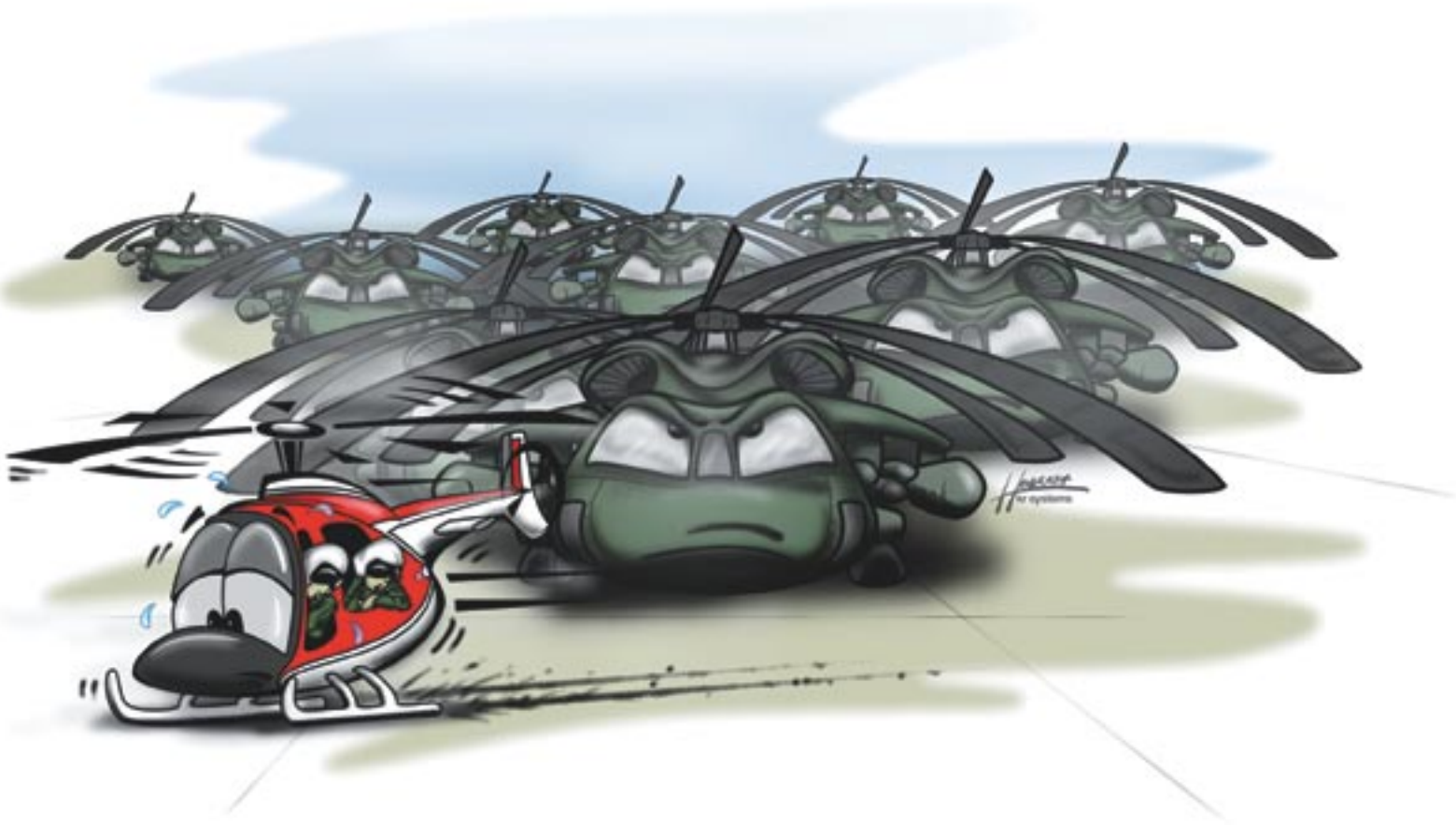
I had been alternating between the copilot's seat and the rear cabin of our TH-57 all day as we tried to complete our cross-country flight from NAS Whiting Field to San Antonio, Texas. Our originally filed destination had been Washington, D.C., but the weather was so poor along the eastern seaboard any attempt to make D.C. would have been nearly impossible. So, after a quick refile and a haphazard collection of new charts, we headed west, through the dense fog surrounding Pensacola into clearer skies over Alabama, Mississippi and Louisiana. We were conservative with our fuel because of strong headwinds along the entire route. We decided to make a quick fuel stop at a small airfield just northeast of Houston, called David Wayne Hooks Memorial Airport.

As we set up for landing at the small helipad adjacent to the operations office, we saw a long line of Army helicopters in what appeared to be an entire squadron of the air cavalry. A half-dozen Blackhawks and twice as many heavily armed Kiowa scouts indicated right away we would have a long wait for lunch. We also would have heavy competition afterward for a takeoff clearance—if we were to finish our trip before sunset.

Compared to the tactical forest-green paint schemes of the Army choppers and the bristling armament hanging from the air cav's external-weapons stations, our little orange and white jet ranger must have seemed downright laughable. We flew aviation's answer to the 1970's era Gremlin: the bad paint scheme and all of the cheap temporary fixes that make a machine look unworthy of safe operation. Regardless, our clown car needed fuel just as surely as did the Army helos, and our money was just as good. The bearded fueling technician, with a full turban and heavily accented English, approached our crew and politely asked how much fuel we would like. With our minds already on lunch and thinking of the pride we would have to swallow while eating with the air cavalry, our instructor nonchalantly replied we would take 90 gallons.

"Ninety gallons?" responded the fueler with wide eyes. "OK."

Lunch went off much more comfortably than we'd anticipated. We even had a few conversations with the Army bubbas about their pin-clad Stetson hats and their operating routine in and around Texas. We compared stories



about Army and Navy flight school and shared some self-deprecating humor about our unique ways of doing things. Managing to finish our meals in record time—to get a head start on the olive-drab fleet of helicopters dwarfing our jet ranger—we hurried out of the dining room, paid our fuel bill, and ran through our preflight under the curious eyes and amused smirks of the Kiowa pilots. After religiously checking every nook and cranny of our aging trainer in true flight-school fashion, I took my position as the backseater and watched as my fellow student flicked on the battery switch and stared incredulously at the fuel gauge.

To his horror, the needle was pegged well beyond the clearly taped max-fuel indicator, and we wondered just how full the fuel bladders could be. Unfortunately, and this is where the moral of the story comes into play, we couldn't recall exactly how much fuel we had remaining upon landing. But, we guessed it was somewhere around 30 gallons, which led us to the next question. Calling the fueling technician over to the pilot-side door, the instructor asked politely, "How much fuel did you give us?"

The man answered with his heavy accent, "Ninety gallons, like you asked."

Quickly realizing the mistake in not specifying we required 90 *total* gallons, as opposed to 90 gallons in *addition* to what we already had, my instructor soberly nodded his head, thanked the man in the turban, and slowly closed the cockpit door. We realized we were in a pickle and knew how much embarrassment would ensue from most of the remedies that obviously presented themselves.

We could (1) attempt to defuel, which was unlikely with the equipment available, (2) burn down fuel by sitting on the deck for 45 minutes or more, which would make us look foolish in front of our new friends, or, (3) try an actual max-gross-weight takeoff and hope we had enough torque to clear the trees at the end of the runway. Of course, all of these options would be tried in front of a full audience. Dozens of air-cavalry pilots were standing idly on the taxiway in front of their mean, green, fighting machines, with their Stetsons resting atop their balding foreheads and their hands resting patiently on their hips. Not a good setup for any one of our choices. But, to save face and maybe to impress a few of our

bystanders in the process, we opted for the max-gross-weight takeoff.

Droning over the ICS like the voice of my conscience was my instructor's voice as he brought the twist grip to full open, "This never leaves this cockpit, understand?"

In fact, the earphones in my helmet never ceased to chatter as my instructor continually talked himself through the slow application of power that brought the strained jet ranger into what couldn't have been any more than a six-inch hover over the tarmac—with maximum torque indicating clearly on the instrument panel.

This sight clearly piqued the interest of our Army observers as the tiny helicopter began to creep painstakingly forward at a snail's pace. We didn't waste a single bit of forward momentum in our quest to reach translational lift before slamming back into the runway. Steadily, our speed began to increase from a standstill to 10 knots, 15 knots, and 20 knots, all the while skimming the deck at a height of mere inches.

Just as I began to be astonished by my instructor's skills and opened my mouth to compliment him on his flying, the skids contacted the runway—first, only briefly, producing a rough and scratchy bounce. But the brief loss of momentum quickly brought both skids into full contact with the tarmac, resulting in a loud screech that showered sparks behind the aircraft and two, deep, black skid marks.

I felt sensory overload coming on from the constant talking in my helmet, the howl of the skids, and the light show from the sparks and wondered if our valiant effort was doomed to failure. Surprisingly, though, we continued to gain speed. The skids once again left the runway, allowing the tiny aircraft to bounce its way higher and higher into sustained forward flight. Just before the crest of trees awaiting our fiery finale at the departure end, we burst into the sky in one final, glorious leap.

As we turned downwind for our departure from the confines of the field, I glanced back at the taxiway to see the air cavalry tossing their hats into the air and applauding with loud cheers at our foolhardy but successful attempt to play the odds against physics.

In hindsight, which we all know is 20/20, the better option would have been to burn down our fuel on the helipad and accept the inconvenient delay that was the result of our own poor communication with the fueler. In this instance, we came out unscathed and provided some unexpected entertainment to our air-cavalry peers. But, we pushed dangerously close to the aircraft limits trying to save time and face. Had we not had the necessary winds, or perhaps a less experienced aviator at the controls, our decision could have wound up as a mishap report, rather than an *Approach* article.

Never play the odds with fuel or weight limitations, and make sure your priorities are straight. Saving face or impressing peers is never worth the risk of destroying an aircraft and losing a crew.

Lt. Eilers flies with HS-14.

Naval Safety Center Accomplishments

2004 Victories

- ☑ ORM and High Risk Training OPNAV directives released December 04
- ☑ First Flag notification requirements for Class A mishaps
- ☑ *Traffic Safety Across America*—Road show and CD produced/distributed to the Fleet
- ☑ Institutionalized Culture Workshop program at NSC
- ☑ Launched upgraded version of WESS in July 2004 for improved fleet mishap reporting
- ☑ Agreement with Motorcycle Safety Foundation and Specialty Vehicle Institute of America
- ☑ Safety Campaign Plan
- ☑ Established the Navy/Marine Corps Safety Council (held meetings in March and September)

2005 Priorities

☐ **Operational Risk Management**
- Complete comprehensive review
- Develop "cradle to grave" training
- Implement OPNAVINST 3500.39B Operational Risk Management instruction

☐ **Traffic Safety**
- Complete baseline review
- Further evaluate simulator use for Driver Improvement (AAA-DIP) and Emergency Vehicle (EVOC) training

☐ **WESS**
- Improve mishap reporting throughout Fleet
- Aviation HAZREP reporting via WESS online April 2005
- Aviation mishap reporting via WESS online December 2005

☐ **Culture Workshop**
- Introduce Culture Workshops throughout surface community
- Increase use of available online safety surveys
- Establish independent Culture Workshop division at Naval Safety Center

FY05 through 02 Feb 05	USN			USMC		
indicates less than 34% of goal; indicates 34-66% of goal; RED indicates 67% or more of goal.	FY04 Total	FY05 To Date	FY05 Goal	FY04 Total	FY05 To Date	FY05 Goal
Aviation Class A flight mishaps	12	6	10	18	3	7
Shore/ground Class A mishaps (including motor vehicle)	14	5	7	26	11	10
Afloat Class A mishaps	8	2	5	N/A		
PMV fatalities	73	28	37	46	15	32
Off-duty recreational fatalities	22	5	10	11	2	5

Size Does Matter

By Ltjg. Erin Wreski

One thing I've learned in my short naval-aviation career is that asking questions, even if you think they are dumb, may save your life. I was fortunate to join my squadron in the early stages of our work-up cycle and ease my way from the FRS training syllabus into the tactical world of the fleet. I was comfortable in the Prowler, and long flights never seemed to phase me. That "comfort zone" changed on my first flight in a dry suit, during our operations over the Gulf of Alaska.

Throughout flight training, we always had been introduced to new equipment and had trained extensively in its use. This high level of training was the norm from the moment I was introduced to the world of naval aviation. I hit my first true hurdle, though, when I was introduced to the dry suit; I had a serious lack of knowledge, and I didn't ask the right questions.

At the FRS, the PRs ordered us all kinds of gear we would need in the fleet. We didn't need a lot of this gear right away, so it would be thrown in the back of the closet and forgotten. When I arrived at my new squadron, fresh-faced and ready to go, I handed over all my gear and let the PRs do their magic. A few months later, they called me down to the shop and asked me to try on a dry suit; I happily obliged. I took the dry suit to the female head and struggled into it. I'm an active warm-water scuba diver, so I'm used to skin suits and lightweight wetsuits. I assumed the dry suit would work the same way: It would be a bit snug. I tried it on, walked back to the PR shop, and had them look at it. They said it looked OK and asked me how it felt. Instead of asking how it should feel, I said, "It fits fine." I then took it off and didn't give it another thought.

Fast-forward to Operation Northern Edge 2004 and my first flight as part of a large-scale operation. The water temperature in the Gulf of Alaska was a chilly 40 degrees Fahrenheit, and word was passed down we had to wear dry suits for all flights. I had heard all the jokes about the dry suits. Aircrew always were complaining about how uncomfortable they were and how the rubber around the neck pulled at your skin. I had prepared myself to be somewhat uncomfortable in the jet, wearing the dry suit, but I was unprepared for how much of a hindrance it actually became.

Dressing in an ill-fitting drysuit is a challenge.

I put on the dry suit over a T-shirt and pair of shorts; I could not imagine wearing anything thicker underneath. Meanwhile, I watched all the other aircrew climb into theirs, wearing thermals. This observation should have been my first clue something was wrong. After putting on the rest of my gear (for the first time), I realized how ill-fitted my dry suit really was, and we still had more than an hour before launch. Again, I should have said something about my sudden loss in range of motion, but, like most aviators, I figured I would try to tough it out.

Once up on deck, I ran into more problems. Climbing into the

Because of the tight fit of her drysuit, this was the limit of vertical leg movement.

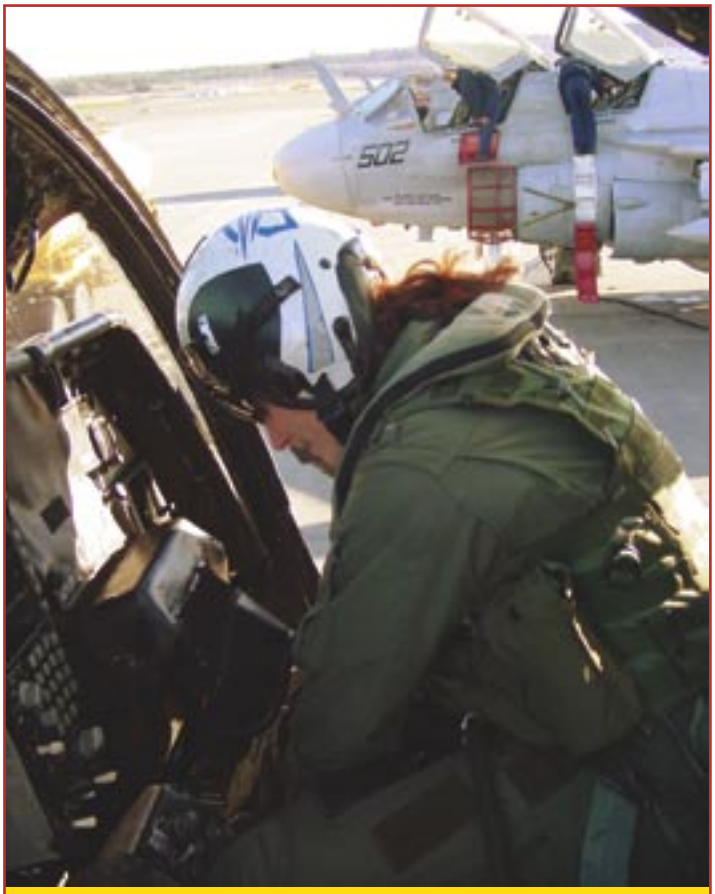
jet became almost impossible because the dry suit was even tighter with the added resistance of the G-suit and harness. I did not have the freedom of movement necessary to bend my knees and climb the boarding ladder. I struggled all the way to the top and into the jet.

Once in, I couldn't reach vital circuit breakers without having to unstrap. I realized I would have to put my life at risk, as well as the other three aircrew, if I had to pull circuit breakers. Later in our flight, I started to lose feeling in my toes. Circulation in my feet was cut off because the dry-suit booties were too small. All of these issues started to add up, and my focus was taken away from my flight and the immediate tasks of our mission. Instead, my attention shifted to my excessive discomfort. Once back on deck, I again had to struggle out of the jet; the loss of feeling in my feet did not help.

Upon my return to the PR shop, I knew everyone else had been uncomfortable, so I didn't make a big deal about my situation. A few flights later, I had had enough and talked to the PRs about it. They were concerned, but they couldn't do much. This far into deployment, there weren't any replacements or a way to alter my suit for a better fit. Only after I began asking around the squadron did I find others who also lacked a good range of motion and the reach required to operate certain equipment. Suddenly, I found I was not alone. Others silently were battling their issues with ill-fitted dry suits.

I always have had to face obstacles because, at 5 feet 3 inches, I'm smaller than the average aviator. One obstacle is my inability to reach the handle to lower the hook in some of our fleet aircraft. Being in the EA-6B, with two aircrew in the front, my reach has not been a significant problem as long as I brief that, in any extremis situation, such as lost brakes on the boat, my pilot might have to get the hook. As with most of the difficulties my smaller stature has generated, there have been easy fixes. One lesson learned here is if you are unsure, ask questions. The issue with the dry suit easily could have been fixed had I spoken up and asked questions early into the fitting process.

A proper fit would have fixed my comfort level in the plane and possibly extended my survival time in the water (by being able to wear thermals and a liner, for which the dry suit was designed). However, it would not have fixed the mobility issues associated with wearing a dry suit. If the dry suit creates mobility issues on land and in the cockpit, I imagine that, after the chaos of an emergency and a violent ejection, the last thing you would need to deal with upon hitting the water is an inability to maneuver while fighting for survival. A second lesson is a lesson relearned: When receiving new gear, take it out, try it on, and use it. Find out its limitations, and yours, before you need it for survival.



Forward movement is limited in an ill-fitting drysuit.

Ltjg. Wreski flies with VAQ-139.

Not Your Average IQ

By LCdr. Richard A. Rivera

After two years of instructor duty in VFA-106, I was ready to get back into operational flying. I just had received orders to the CVW-5 staff as the strike-operations officer. Because I hadn't been to the boat in over two years, I would join a small class of pilots to carrier qualify on board USS *George Washington* (CVN-73).

This opportunity sounded too good to be true. Our class was set at four instructor pilots bound for sea duty, one Cat III PXO, and three Cat I replacement pilots. The class had all the earmarks of a two-day evolution, allowing me to quickly get back home to my soon-to-be fiancé for some quality time together before heading to Japan. I looked forward to telling her harrowing tales of pitching decks and dark nights, but I wasn't prepared to tell her the story of my ejection-at-sea during Case I day, steady-deck operations.

Looking back on the mishap, I believe all signs pointed to the fact that it was just my day. Fortunately for me, instinct rather than skill kicked in, and I'm able to laugh and tell stories about it today.

The day before the event almost was criminal: CAVU day, with 31 knots of natural wind down the angle, followed closely by a CAVU night, with a moon seemingly bigger and brighter than I'd ever seen before. As I dusted off the rust on my first few passes, I realized just how painful life can be in the CQ environment. My first seven looks at the ship included two traps, two touch-and-goes, and three foul-deck waveoffs. After regrouping on deck, my next four passes went well, and I was off to night ops. After completing four "night" traps in a brilliant commander's moon, paddles asked if I would like two more. Well, who really wants two more night traps? Since I *had* to get them, I couldn't pass on the opportunity to shine, given the flight conditions. The rest of the night went well, leaving me with just four more day traps and a COD ride to the beach, or so I thought.

After waking up at the crack of noon the next day (welcome to the boat), I was ready to complete four day traps and get off the ship. After showering and making a trip to the wardroom for chow, I was greeted in the ready room by paddles, who cleverly had altered the flight schedule. The revised schedule allowed yours truly to complete my traps early, with enough time for a trip home on the COD. Having flown in the FRS for more than two years, I was used to changes in the schedule, and this time a schedule finally seemed to have worked out in my favor. This was sign No. 1: I wasn't even supposed to be in that jet.

The man-up in my "family model" FA-18D was uneventful. I had no backseater; it is SOP in VFA-106 to allow aircrew to fly FA-18Ds solo when needed. Rather than sitting on the deck an extra 30 minutes watching CODs and Tomcats CQ, I readied for launch.

As I taxied to cat 2, I went through the flight in my head. I would depart and reenter to burn the extra gas that had been pumped into the jet the night before, and then enter the CQ pattern. The catapult shot went as expected, and I was up and flying.

Just beyond the initial, I heard tower call for everyone in the pattern to "delta easy," meaning something was amiss on the flight deck. Thinking back to day one, where the 3-wire was stripped all day, I immediately thought about the possibility of the ship stripping that wire again, even though I had seen all four wires in

battery before takeoff. I decided to spin, as there was a Hornet just off the bow.

As I came around, I saw a Tomcat at the initial. At that very moment, the boss called for the pattern to "charlie." I decided to call "spin 90," because I thought the Tomcat pilot hadn't seen me. Much to my dismay, he decided not to enter the pattern via the break but instead decided to drop his landing gear upwind, right in front of me, before turning downwind.

Not knowing what to make of the situation, I decided to spin again, rather than go out to six or seven miles. Looking back, maybe I should have departed and then reentered the pattern. I had encountered sign No. 2: I had priority to break, so I should have been in front of the Tomcat that eventually landed in front of me, on the 4-wire.

With my temper under control, I came back around, entered the break with interval on the Tomcat, and got sign No. 3: The Tomcat was stuck in the landing area. I received a foul-deck waveoff and now was taking interval on a touch-and-go COD. In retrospect, I'm glad those guys didn't trap; otherwise, we might have been down two good aviators, depending, of course, on the wire caught. Upon recovery, I found sign No. 4 that it was just my day: On my foul deck waveoff, I had beaten a Cat I RP to the bow by two seconds, as he was getting shot off of the deck. Again, I'm almost thankful it was me, rather than him who took the trap that day.

As I came off the 180, I saw the COD lifting off the bow, so I knew I'd be landing this time. I looked down and saw 6,400 pounds of gas remaining, which was 400 pounds below my max trap (after the foul-deck waveoff). The pass was going well, and I arrived at an on-and-on start, making the normal ball call. The rest of the pass was unremarkable until landing rollout.

As I touched down and went to mil, I thought I should have had caught the 3-wire; at least, that's what my deck-spotting eyes told me. Instead, I began to roll out and felt the tug of the 4-wire against my 34,000-pound jet. I had only three traps to go, right? Wrong.

On rollout, I felt what appeared to be normal deceleration, followed by a tug on the jet. The jet then seemed to feel like it was skidding to the left. At this moment, I realized I had experienced the typical time compression many ejection survivors talk about. I analyzed all of these things in my head in the span of about one second. What was that? It feels odd. Something is not right. I'm not going to stop. And, oh $&#@! I reached down and pulled the yellow and black handle between my legs, while the jet still was completely on the flight deck.

I couldn't believe what was happening as I felt a huge acceleration up the rails. Thinking back, the first thing that came to mind as I felt the seat shoot up and right was, "What did I do wrong?"

The next thing I remember was silence as I saw my $44-million training device splash into the water below me. That image is one I'll never forget; it seemed to play over and over in my mind that night while I tried to sleep.

Before I knew it, gravity took over, and I found myself in the low-altitude-IROK regime. However, IROK was not the first thing on my mind, as I wanted to know where I would land. Having seen many ejection videos during safety stand-downs, I knew I didn't want to hit the steel deck. By the time (which was not long) I looked over my left shoulder, I already was passing the left side of the flight deck, quickly plummeting toward the water on the port side of the boat.

Because the wind was a constant 30 knots, I hit the water in what felt like a 45-degree angle aft. The instant my feet hit the water, I knew I hadn't done the most important step of the low-altitude-IROK procedures: Find my Koch fittings. A feeling of panic went through my head as I submerged only 30 feet from the gigantic

aircraft carrier. About the time I could think about my fate, I heard a large blast and found myself floating, with my back to the ship. The SEAWARS had done its job, and my horse-collar life vest automatically had inflated. I saw the parachute flying through the air, ultimately landing abeam the LSO platform.

I was alive and very happy, but I couldn't breathe. I removed my oxygen mask, quickly remedying that problem. For some strange reason, my next instinct was to see where the jet had landed. As I turned to the right, toward the bow of the boat, I immediately swallowed what seemed like a gallon of water. The swells were huge, but I managed to catch a glimpse of my training aid sinking—vertical stabilizers sticking out of the water—Davy Jones's locker. This situation felt very surreal to me, and I again began to wonder what I had done wrong.

I continued to turn toward the ship and never will forget the things I saw. My first sight was of two Sailors on the smoking sponson, having a drag. Their eyes widened when they realized I was floating by, and I gave them a thumbs up, signifying I was OK. The next thing I remember was someone on another sponson throwing me a life ring, which landed about five feet from the hull of the ship. With good flotation, I decided I wasn't going there. I began sculling away from the ship. Did I mention I looked straight up and saw people directly above me on the flight deck gazing down on me? I likened my trip down the port side of the ship to the first scene in the movie "Spaceballs." I was up close, and the ship seemed endless as it drove by me at two to four knots.

I heard the helicopter coming, so I decided to conserve energy and wait for its arrival. About that time, I saw my first familiar face standing on the flight deck, "Bert" Kiggans, VFA-106 LSO. When he saw I was OK, he smiled back and gave a big thumbs up. Oddly enough, we began conversing (that's how close I was to the ship, and yes, I still was in the water). I asked, "What the hell happened?"

He replied, "The 4-wire broke."

A huge feeling of relief came over me when I realized I was not at fault. I didn't know the carnage that had occurred on the flight deck.

The helicopter then showed up overhead the wreckage, about 50 yards away from me. I fell back on my water-survival training and began to wave my arms, throwing water up into the air. Every person within eyesight assisted in the effort by pointing to my cork-like body in the sea.

I gave the aircrewmen a thumbs up as the rescue swimmer plummeted into the ocean near me. Understanding that my rescuer was better trained than me, I sat back and allowed him to prep my body for the ride to the aircraft. He removed things that could hinder my ability to smoothly ride up to the helicopter: namely my seat pan and kneeboard.

I lowered my visor, turned my head to the side, and crossed my arms as I rode skyward into my rescue craft. My brother, an SH-60 pilot, could appreciate my next statement: "I never have been so excited to be riding in a helicopter in my life!" They quickly took me to the ship, where I was happy to disembark standing up.

After stepping off the helicopter, I saw the chaos on the flight deck that had ensued after

my ejection. All told, 13 had been injured as a result of the parted wire "snapping back" on them. Fortunately, and somewhat amazingly, there were no deaths. I was taken to medical, where I found I was the least injured of those involved.

The medical experience and post-ejection paperwork was an ordeal I never want to repeat. After two hours of waiting for the injured to be treated, I had to urinate in a large cup, give 12 test tubes of blood, and pose for about 30 X-rays. I finally was released four hours later to the confines of our makeshift ready room, where I recreated my 72-hour history on paper for the mishap board.

No amount of training could have prepared me for this scenario. It happened quickly, without warning. I was fortunate to immediately recognize I was in a position with only one alternative: Pull the handle. I pray you never face that decision.

It was determined that the arresting-gear maintenance had been completed improperly, leading to down MAFs on the gear. Having flown aircraft for more than eight years, it always has been drilled into my head never to take a "down" aircraft. I only can hope my ejection will remind everyone of this rule that, quite obviously, is written in blood.

Every piece of my survival gear worked, from the seat to the SEAWARS and automatic LPU inflation. From the time I pulled the handle until I was in the water was about seven to nine seconds. There wasn't much time to execute low-altitude IROK procedures (not to mention my shock and confusion), making me a believer of all of the automated systems in our survival gear. I couldn't thank the PRs and AMEs enough.

Finally, no one was killed because they all wore the appropriate safety gear necessary to work in the most dangerous environment in the world: the flight deck of an aircraft carrier. I think the survivors will agree with me on that point.

I consider myself fortunate to be alive after this mishap. I hope you'll consider the events I've described the next time you trap.

LCdr. Rivera is with CVW-5.

Did You Preflight, Sir?

By PR2(AW) Vernard P. Silver

I've seen many things in my 10 years in the Navy. I've been on four cruises and seen much of what the world has to offer. While at my last command, I had seen that planes sometimes have problems that defy gravity. I've also seen pilots get dressed in their flight gear without thinking twice about what survival gear they have, or its condition. Some pilots most likely would fly naked if they had the chance.

I enlisted in the Navy in 1994. From boot camp, I went straight to A school. I had the time of my life. I showed up at my first command, an

HS squadron, I loved it there. We had about 35 pilots and aircrew. They would come in, put on their gear, and go fly—paying little attention to their survival gear. I asked my supervisor about their preflight. He just would tell me, "That's the way things are." I accepted his answer and went about my business; I did my job to the best of my abilities.

My next command was a test squadron, and those pilots were a little better about doing a preflight inspection of their survival gear. I really understood why having the proper gear was important after a UH-1 crashed in the mountains, and the crew needed their gear.

Most of the pilots would preflight the gear, while some would just "grab and go."

Most of the pilots would preflight the gear, while some would just "grab and go." I figured that was "just the way it was," until I lost a friend in an accident. After that, I have been adamant about accounting for tools and flight-gear preflights. I constantly remind pilots about their preflight, and some still don't listen.

I have served on many aircraft mishap-investigation teams, and I have found a common thread among those who have survived. All of them had preflighted their survival gear, and knew where everything was and how to use it.

If it weren't for the parachute riggers' dedication to making sure aircrew have all their required equipment, and in good condition, we would have lost a lot more pilots. I just have one question for all the new pilots out there, as well as the old ones, "Did you preflight, sir?"

To the riggers, keep 'em safe, keep 'em flying…and don't give in to the pressure.

PR2(AW) Silver is with VFA-83.

A crew from Marine Heavy Helicopter Squadron 461 were preparing to fly a long-range external transport of an M998/HMMWV from the Horn of Africa. Capt. Jennifer Grieves, the CH-53E aircraft commander, and Sgt. Joseph White, the crew chief, were conducting a prelift brief with the helicopter-support team (HST) to inspect the security and integrity of the dual-point external slings.

They discovered one of the sling's retaining bolts was missing, and only a small cotter pin kept the retaining pin in place. Had the crew failed to discover this imperfection and tried to lift the external load, the retaining pin could have fallen out, resulting in the inadvertent jettisoning of the HMMWV, potential damage to the aircraft, or injury to the HST or aircrew. Thanks to the aircrew's attention to detail and highly professional work ethic, a flight mishap was avoided.

Left to right. Cpl. Daryl Brinegar, Sgt. Joseph White, Capt. Jennifer Grieves, 1stLt. John Martin, and Cpl. Terry Skinner.

BRAVO Zulu

From L to R: Cpl. James Inglis (AO), Capt. Samar Nashagh (HAC), Capt. Christian Robertson (PAC), Sgt. Gabriel Walker (CC), LCpl. Jared Johnson (CC)

During a section resupply mission from Bagram Air Field, Afghanistan, Ironman 43, a Marine Corps CH-53E Super Stallion helicopter from Marine Heavy Helicopter Squadron 462, lost the No. 1 engine while approaching the summit of a 10,000-foot mountain. The aircraft carried 19 passengers and 9,000 pounds of cargo.

Without sufficient power to clear the mountain peak, Capt. Samar Nashagh, the helicopter-aircraft commander (HAC), immediately reversed course, enabling a descent and increasing airspeed. The copilot and crew chief began dumping fuel and prepared to blow the auxiliary-fuel tanks. The fuel dump, decreasing altitude, and the additional airspeed proved sufficient to arrest the dramatic and immediate loss of power and altitude caused by the engine failure.

The aircraft returned to Bagram airfield and landed with two of its three engines operating. An engine loss at those altitudes and weights can (and has) resulted in catastrophe. Were it not for the immediate and appropriate actions of this aircrew, 23 souls and an aircraft may have been lost.

Crew Resource Management

Situational Awareness
Assertiveness
Decision Making
Communication
Leadership
Adaptability/Flexibility
Mission Analysis

By AEC(AW/NAC) Dan Schwertfager

Our crew had been operating for a month out of the Manta, Ecuador, forward operating location (FOL). Our missions were in support of Operations Dolphin Archer and Caper Focus.

Our day began with a 0900 preflight for a five-hour reposition flight to NAS Roosevelt Roads, Puerto Rico. The P-3 we were to take back had arrived in the FOL two weeks earlier with a flap-asymmetry gripe, which was fixed with a flap re-rig, followed by a functional check flight. The plane then sat idle for two weeks.

After takeoff, we leveled off at FL230 as the crew began to ponder what the next couple of weeks in Puerto Rico would be like. One hour into the flight, the flap-asymmetry light illuminated with the flaps in the up position. A quick visual inspection verified both flaps were in the full-up position and would not be available for landing. We broke out NATOPS, reviewed the procedures, and began a risk analysis of our situation.

Flaps in the full-up position require higher speeds and AOA for approach and landing, and they create much longer landing distances. We evaluated our options and considered weather, runway numbers, and fuel remaining. Everything favored continuing to Puerto Rico.

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As expected, I saw a little fluid but no massive puddles or any sign of a leak.

We try to keep all crew members "in the game" during every flight, and we routinely fire "what if" questions to each other. I thought it was time to toss a question to the crew. I looked out the starboard aft window and asked over the ICS, "What are everybody's thoughts on losing an engine during the rest of the flight?"

During the conversation, the second flight engineer saw a slight reduction in the No. 1 hydraulic quantity from what had been noted during the preflight. I still was in the back of the plane, so I grabbed my cranial and goggles to take a look in the hydraulic service center (HSC). As expected, I saw a little fluid but no massive puddles or any sign of a leak. We once again evaluated our situation and decided to continue. Heck, it's not like the P-3 never leaks.

At the four-hour mark of the flight, at FL230, the pilot thought he saw something flicker on the horizontal-annunciator-lights-panel assembly for the No. 3 engine; the flight station became abnormally quiet. I ran a lights check to see if any lights were burnt out, and I also checked to see if the "flicker" could have been the sun's reflection on the lights panel. As I scanned engine indications and the pilot finished checking the engine nacelle for any external indications, the No. 3 chips light came on for about 15 seconds, then went out. (The chips light means metal particles are on the power section or the reduction-gearbox magnetic plugs.)

The No. 3 engine had no secondary indications of an engine or gearbox failure. NATOPS requires the engine to be shut down when a chips light comes on. If another emergency requiring power exists, the crew may elect to leave the engine running. This bad day was getting worse.

Aircraft pressurization is provided by two engine-driven compressors (EDCs): one on the No. 2 engine and the other on the No. 3 engine. One EDC should be able to maintain pressurization; however, we also had an outstanding gripe in the book for a weak No. 2 EDC. This situation presented a dilemma because, as I mentioned, we were cruising at FL230.

The pilot immediately contacted center and coordinated a descent to help the No. 2 EDC maintain cabin pressurization. Because of our altitude, we kept the No. 3 engine running to help maintain pressurization.

Center initially cleared us to FL150, and we evaluated the remaining EDC's performance. The cabin pressure stabilized at 7,500 feet. The three-engine-at-15,000-feet range chart determined, with the fuel remaining, we would land 1,000 pounds above our on-top fuel requirement.

Once everybody was comfortable with the situation, and no more questions existed, we shut down the No. 3 engine.

In the Orion world, we routinely practice no-flap landings; we also practice three-engine landings. However, we do not routinely practice no-flap, three-engine landings.

All the crew aft of the flight station, who weren't too concerned before, now were trying to find reasons to crowd into the flight station. This rush forward included our one passenger, the FOL maintenance-control chief who had released us "safe for flight."

After what seemed to be an endless list of "what if" questions, and a good old-fashioned, round-table ORM discussion by the flight station (three pilots and both FEs), we decided to set up No. 3 engine for restart. With no secondary indications from the chips light, we agreed it would be beneficial to restart the engine before commencing the approach. We would do a four-engine, no-flap landing. If the No. 3 engine then developed secondary indications and degraded, we would shut it down for good.

Before arriving at the initial approach fix, we reviewed the emergency-landing brief and the no-flap-landing procedures, completed our required checklists, and then restarted the No. 3 engine. All engine indications appeared normal, and we started our approach.

Three miles from the landing threshold, the No. 1 hyd-press light illuminated (Do you recall our earlier slight loss of hydraulic fluid in the No. 1 system?). This light means the No. 1 hydraulic-pump pressure has dropped below the required limits. I secured the No. 1 hydraulic pump after talking with the pilot and verified the integrity of the No. 1 system. The No. 1A pump still worked and we saw no loss of fluid indicated.

After announcing an "all good" to the flight station, we let the crew know everything was OK and flew a textbook, uneventful no-flap, four-engine landing.

After landing rollout, we secured the No. 3 engine, and, during the taxi to our line, the second FE verified the HSC was clear and the integrity of the No. 1 hydraulic pump was intact. The main-power circuit breaker on the main load center had tripped; we reset it, and the pump ran fine. During postflight, the maintenance crew inspected the aircraft and found numerous gripes. The port flap brake was seized, the starboard flap brake had damaged pins, and the flap-asymmetry relay was shorted because of the flap gripe. The metal fuzz found on the No. 3 gearbox-mag plug was non-rejection criteria; a follow-on penalty run yielded no more fuzz. The HSC leak was within limits, and the No. 1 hydraulic-pump circuit breaker, when set, operated normally, and the discrepancies could be duplicated.

Though we train for any of these malfunctions individually, when combined, this situation became an excellent ORM scenario. If we had added a few more malfunctions and a little runway work, we could have completed a fly flight for the junior pilots and my second engineer.

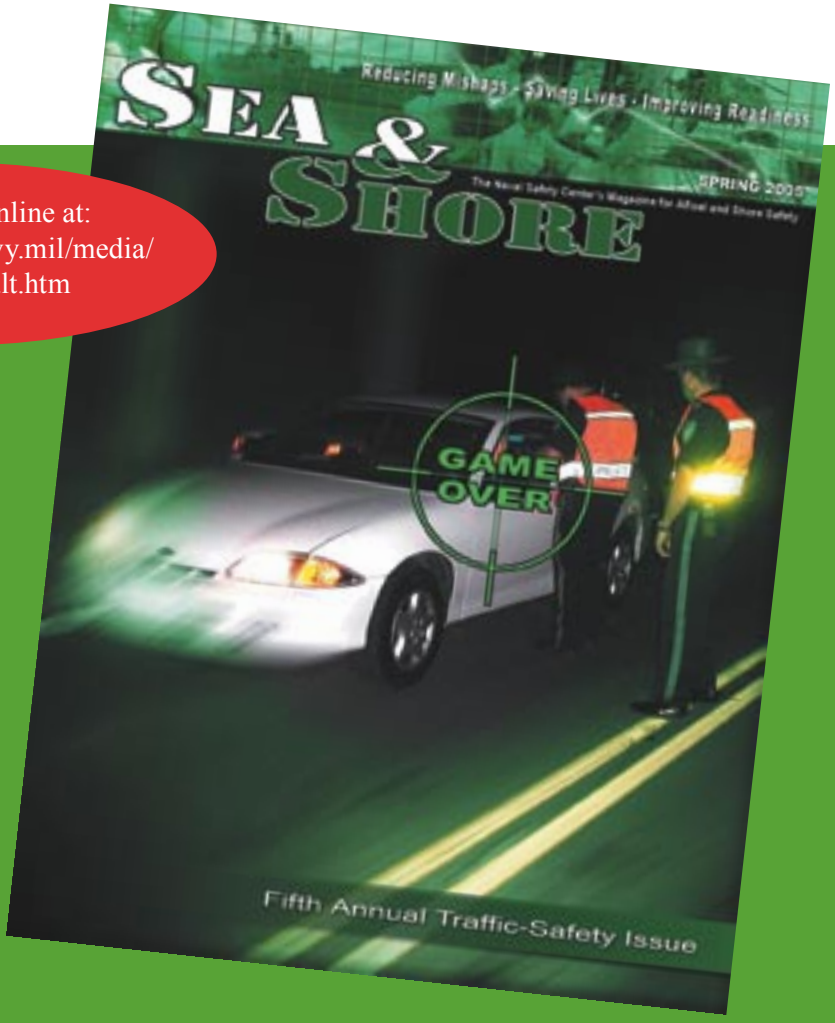
I think this event made the biggest impression on our single passenger, the maintenance-control chief. So many times he signs "safe for flight," then the plane leaves, comes back, gripes are written, and gripes get fixed—the same old routine. But, when he actually got to experience the full effects of an in-flight malfunction, combined with a few problems, and to see the process we go through, he was impressed. After we had finished our post-flight, he still was talking about how fluent and methodical it looked. He said we had made it look easy.

AEC(AW/NAC) Schwertfager flies with VP-5.

One of the ways to mitigate "what if" questions is to decrease our exposure to an existing hazard. In this case, did everything favor a "continued transit?" What about the increased exposure to the chance of multiple malfunctions?—Cdr. Buc Owens, P-3 analyst, Naval Safety Center.

Also available online at:
www.safetycenter.navy.mil/media/seashore/default.htm

Feedback indicates some people haven't seen a copy of *Sea&Shore* magazine—with a new title and a new look, that's understandable. Most of you, though, likely are familiar with *Fathom* or *Ashore* magazines, which were combined into this newer publication dedicated to afloat, shore, recreational, and traffic safety. We attach special emphasis to this latter category, since highways still rank as the No. 1 killer of our Sailors and Marines.



With the "Critical Days of Summer" on the horizon, I urge you to watch for the spring 2005 *Sea&Shore*, which will be the Naval Safety Center's fifth annual traffic-safety issue. The period between Memorial Day and Labor Day weekends notoriously is a tragic time for Sailors, Marines, their families, and friends. In 2004, we lost 23 Sailors and 13 Marines in PMV mishaps during that period. The spring 2005 issue should be on the street by late March.

Start planning now to avoid fatalities this summer. As you look at the statistics, don't just look at the numbers. Each number represents a spouse, a parent, a friend, and, in most cases, a preventable mishap.—*Ed.*

For more traffic-safety information, visit these websites:

http://safetycenter.navy.mil/presentations/ashore/motorvehicle/traffic.htm
http://safetycenter.navy.mil/ashore/motorvehicle/toolbox/default.htm